THE BRITISH JOURNAL
OF
DERMATOLOGY
FEBRUARY 1959

SUBACUTE NODULAR MIGRATORY PANNICULITIS.

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We described a new entity in 1956 characterized by deep-seated nodular lesions on the lower part of the legs, enlarging by confluence or peripheral extension to form plaques of up to 20 cm. diameter. It was found only in females and was often preceded by a sore throat and cleared up after a short period of treatment with potassium iodide. The histology in these cases was characteristic. The lesions were located in the interlobular septa of the hypoderm, showing proliferation of capillaries with sparse infiltrations of histiocytes and monocytes and notable changes in the collagen fibres. We discussed Bäfverstedt's paper on erythema nodosum migrans. Rabbiosi (1958) and Bureau *et al.* (1958) have published similar cases confirming our observations.

We have had the opportunity to observe several new patients, which has increased our knowledge of the clinical and pathological aspects. In this paper we wish to report these new findings, avoiding as much as possible repetition of details which we have already published.

Clinical Data.

The outstanding clinical findings in nineteen new cases are listed in Table I. Together with the fourteen included in our first publication, these total thirty-three. Among the new cases was the first male in our series.

The age of onset varied from 16 to 65 years. The period of evolution of the plaques may be more than 3 years. This occurred in Case 4 and new nodules appeared from time to time at the edge of the plaque. More often the period of evolution was under a year. In Case 10, several plaques appeared in short succession or after periods of a few months for over five years.

All patients had nodules and plaques limited to the lower part of the leg. Most patients had lesions similar to those previously described. Some had

TABLE I.—*Clinical Features.*

Case No.	Age (yrs).	Sex.	Period of evolution.	Localization.	Morphology of the lesions.	Anti-streptolysin titre.	Observations.
1	43	F.	More than 3 years	Lower leg	One plaque	100	Accompanied by notable oedema.
2	66	,,	1 year	Lower leg	One plaque and two nodules	125	Resembled nodular vasculitis.
3	26	,,	2 months	Lower leg	One plaque and three nodules	360	—
4	23	,,	1 year	Lower leg	Plaques and nodules	120	
5	37	,,	18 months	Lower leg	One plaque	160	Intolerance to KI.
6	65	,,	40 days	Lower leg	One plaque	120	Sclerodermiform.
7	18	,,	19 months	Lower leg	Plaques and nodules	—	Trauma before onset; localised around knees; resembled nodular vasculitis.
8	45	,,	4 months	Thigh	Plaques	—	—
9	40	,,	3 months	Lower leg	One plaque	125	Twelve and 3 years previously had lesions similar to the present.
10	36	,,	5 years	Lower leg	Nodules and plaques	—	Resembled nodular vasculitis.
11	33	,,	3 months	Lower leg	One plaque	—	Trauma before onset.
12	26	,,	5 months	Lower leg	Plaques	320	Some plaques resembling stasis dermatitis.
13	37	M.	1 year	Lower leg	One plaque	—	E.S.R. 100 mm. 1st hour.
14	43	F.	6 months	Lower leg	Nodules	—	Resembled nodular vasculitis.
15	25	,,	7 weeks	Thigh	One plaque	—	
16	31	,,	2 months	Lower leg	Plaques	—	Initially like nodular vasculitis. E.S.R. 31 mm. 1st hour.
17	48	,,	4 months	Lower leg	,,	—	—
18	28	,,	3 months	Lower leg	,,	—	—
19	33	,,	1 month	Lower leg	One plaque	—	—

confusing features which were very difficult to distinguish from those of other nodular lesions of the lower legs. Case 10, which was observed for five years, and Cases 2 and 16 sometimes closely resembled nodular vasculitis. Some nodules lost their tendency to enlarge peripherally, the only distinguishing feature in such cases being the occasional presence of a few typical plaques. Two patients (Cases 7 and 14) were diagnosed as nodular vasculitis several years ago, but were recognized as subacute nodular migratory panniculitis clinically and histopathologically when we became familiar with the new entity. These observations show the possibility of confusion between the latter, nodular vasculitis and erythema induratum. This may occur if the patient is under observation for a short period and the diagnosis is made on morphological grounds alone. The location of the nodules around knees and ankles, their limited number and sharply demarcated periphery, the mild inflammatory reaction, the absence of ulceration or softening of the lesion, and its previous

history, are all useful diagnostic points. Sometimes the distribution of the lesions may resemble that of erythema nodosum. Commonly, however, only one leg is involved and the sparse number of lesions, the lack of haemorrhage and their different evolution, suffice to define each entity satisfactorily. In Case 12, the original diagnosis was indurative cellulitis.

Sometimes the plaques have a swollen appearance. Such plaques seem to be the result of the confluence of several nodules. Other plaques have an even surface. Some were so little infiltrated that they could hardly be felt in the surrounding oedema. On the other hand, those situated around the ankles were frankly sclerodermatous in appearance.

In Cases 1 and 11, and in Case 9 of our previous publication, the initial lesion was preceded by slight trauma. Relapses may occur after long intervals. Patient 9 had periods of three and nine years free of lesions between recurrences. Some patients informed us that exacerbations were accompanied by slight fever but we were unable to observe this. Eleven patients had acute tonsillitis before the onset of the hypodermal lesions. Several cases had previously been diagnosed as rheumatism. Treatment for this, including steroids, failed to improve the lesions.

Laboratory tests furnished results similar to those published in our previous article. The E.S.R. was accelerated in Cases 13 and 16. After treatment with potasium iodide, the lesions cleared up but the E.S.R. remained raised for several weeks before returning to normal. We found an elevated antistreptolysin titre in only two patients (Cases 3 and 12).

Histopathology.

The histological findings reported in our earlier publication were universal capillaritis in the hypoderm as the initial lesion, an infiltrate of fibroblasts, histiocytes and monocytes, predominantly in the interlobular septa and various changes in the collagen, from oedema and fragmentation to fibrinoid necrosis and even sclerosis. The fundamental change was capillaritis. This could be observed clearly in all the small vessels. Swelling and proliferation of the endothelial cells, formation of coiled capillaries and "*images en tourbillon*", as well as obstruction of vascular lumina were its chief features. The infiltrate and the alterations of the collagen were less characteristic.

However, on examining the biopsies of our second series, we were surprised to discover many giant cells in some sections. In some instances they were isolated and in others grouped and reminiscent of foreign body granulomas. It was difficult to accept these giant cells as having purely macrophagic functions, since their situation in the septa and the extremely mild alterations of the adipose tissue did not justify a lipophagic granuloma of such a degree.

Careful study enabled us to trace the origin, formation and development of this pseudo-foreign-body granuloma. From the results of twenty-four biopsies,

carried out at different stages of evolution, it was possible to distinguish clearly the following sequence. The capillary endothelial proliferation visible in the earliest stages (lesions 48 hours old) completely and rapidly fills the vascular lumen (Fig. 1). This and the later cellular multiplication of the vascular endothelium gives rise to cellular accumulations which surpass the initial size of the capillaries. In the more advanced stages, their protoplasm fuses together, forming the picture described in our first paper as "*capillarite gigantocellulaire*" (Fig. 2). The final transformation of these cellular groups into isolated giant-cells could easily be seen in many of the sections. In the advanced

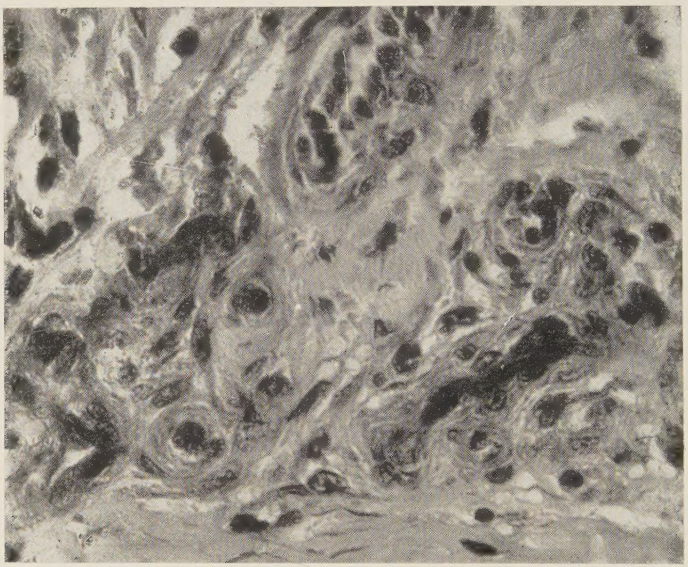

FIG. 1.

stages, the infiltration of fibroblasts, histiocites, monocytes and lymphocytes almost entirely disappears with only slight residual sclerosis. The sole remaining cellular elements are these giant cells (Fig. 3). They are so grouped as to be vaguely reminiscent in some places of the path of the original capillaries. In this manner, these giant cells of endothelial origin represent the last phase in the evolution of the capillaritis.

These histological appearances are constant during the entire evolution of the disease. In Case 10, we found this picture in two biopsies separated by a period of four years. This capillaritis is, however, not exclusively confined to this type of hypodermal inflammation. We have also found giant-cell capillaritis in biopsies of typical nodular vasculitis and erythema induratum. In such cases, there is also fat necrosis and alteration of the larger vessels and there the capillaritis represents a secondary and non-fundamental lesion.

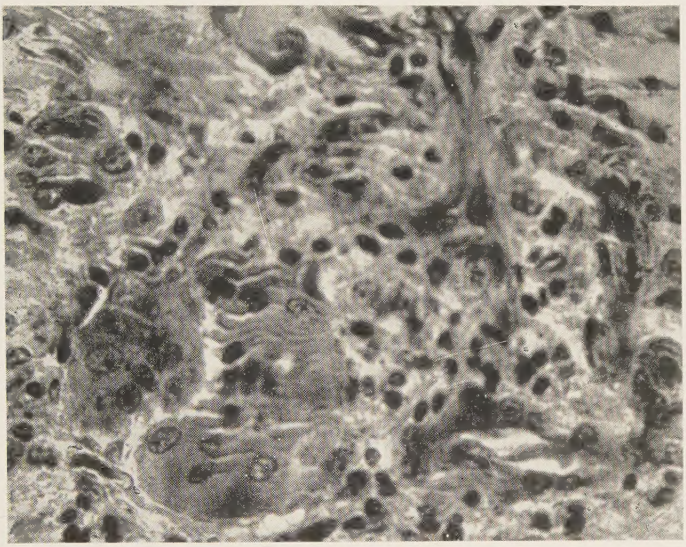

FIG. 2.

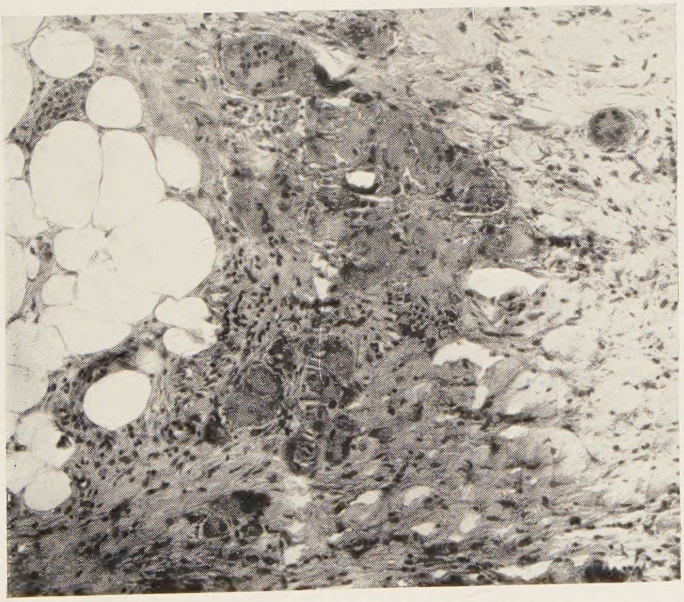

FIG. 3.

Comment.

The diversity of the clinical and histological aspects of this entity explain the difficulties encountered in its identification. It is possible to confuse it with nodular vasculitis, Pfeiffer-Weber-Christian panniculitis, erythema nodosum and stastis cellulitis. It also explains the great diversity of adjectives which have been used in describing some of these cases, e.g., sarcoidal, sclerodermiform and traumatic panniculitis.

The histological picture may also lead to confusion with a foreign-body or tuberculoid granuloma. It is also possible that some of the cases described as Miescher's granuloma disciformis represent its advanced histological stages.

Biopsy enables the diagnosis to be made on many occasions if the stage of evolution of the lesion is kept in mind when making the histological examination.

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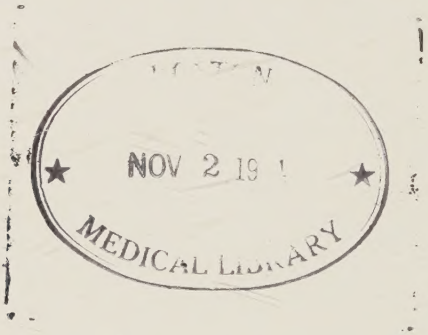

A CASE OF URTICARIA SOLARIS STUDIED WITH A MONOCHROMATOR.

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Patients with urticaria solaris were divided by Blum (1954) into two groups, according to whether the wave-lengths which caused wheals were shorter or longer than 370 mμ (Blum, Barksdale and Green, 1946 ; Blum, Baer and Sulzberger, 1946). In the first group, in which wheals were caused by the shorter wave-lengths, passive transfer of sensitivity could usually be carried out successfully, but not in the second.

Most patients in whom sensitivity to different wave-lengths has been adequately investigated can be placed in one of these two groups—those of Beal (1948) and Epstein (1949) in the first, and those of Blum, Allington and West (1935) and of Kesten (1951) in the second. However, in a patient of Wiskemann and Wulf (1956) urticaria was provoked by wave-lengths of 310–350, 490–520 and 600–680 mμ ; in this patient passive transfer tests were positive. Another case which does not fit into this classification was described by Porter (1954). In his patient wheals could be elicited with monochromatic light from a mercury arc spectrograph. Owing to lack of suitable quartz apparatus tests were not carried out at short ultra-violet wave-lengths of 280–320 mμ. It was found, however, that the 365 mμ line in the ultra-violet and lines in the violet, blue, green, yellow and orange regions produced wheals. Light from a tungsten source, so filtered that only wave-lengths in the infra-red were transmitted, also led to whealing. Passive transfer tests were repeatedly negative. Although Wiskemann and Wulf, in describing their case, claimed it as unique, it can be seen that Porter's earlier case resembles theirs in the wide range of wave-lengths producing wheals. Neither of these cases fits into Blum's classification.

Five years after Porter's original investigations were made, an opportunity arose to study his patient again. She had in the meantime continued to suffer from lesions provoked by sunlight, though the disease had become less severe. In the present investigations the instrument used for the light tests was a monochromator. This is an instrument for breaking up light into a spectrum. The

light source must be powerful, and in our apparatus is a high pressure xenon arc which produces a continuous spectrum.

The radiation from the light source is focused by a system of quartz lenses on to a 2 mm. slit, and from there is reflected by a parabolic mirror on to a water prism with quartz sides. The spectrum thus formed is brought to focus on the skin by means of a second parabolic mirror. A movable second slit enables one to choose the desired part of the spectrum for study. With this instrument narrow wavebands can be selected from any region in the ultra-violet range down to about 240 mμ. The wavebands in the visible range are much broader, the instrument being designed for use principally in the ultra-violet spectrum. The apparatus is to be described in full elsewhere.

Our results have extended and largely confirmed Porter's earlier findings. Whealing was produced at wave-lengths 280–390 mμ and about 490–550 mμ.

Experimental Method.

The skin of the back was used for testing with monochromatic light. The patient sat, leaning gently against the exit slit of the monochromator. The area of skin irradiated was 2 × 8 mm. Exposures of graded duration on adjoining parts of the skin were made at 10 mμ intervals in the ultra-violet spectrum from 250 mμ upwards. Tests were also made with visible and infra-red radiation. At each wave-length the relative intensity of the incident light was measured with a Schwarz linear thermopile with a quartz window. This was done immediately before and after every series of tests at each wave-length. The duration of an exposure depended on the energy of the particular wave-length being investigated and on its biological effect. The number of exposures made with each wave-length was from 10 to 16 in the range 250 to 320 mμ and 6 to 8 in the range 350 to 370 mμ. Single exposures only were given at most wave-lengths above 380 mμ as the testing procedure was somewhat tedious for the patient in this part of the spectrum. This was because exposure times had to be as long as 15 minutes to obtain any response at all.

The minimal or threshold dose required to produce a reaction, whatever the type, should be regarded as being only approximate. This belief is based on our experience with normal subjects, for sometimes we found a difference of 50% between the doses required to produce erythema on different occasions in the same person.

Table I gives details of the monochromatic light tests. The width of the waveband was calculated from the geometry of the optical system of the instrument and is given in the second column of the table. The values for relative intensity of the radiation incident to the skin surface are expressed in arbitary units derived from the galvanometer deflection obtained with the thermopile at the exit slit. The threshold dose, the product of intensity (I) and length of time in seconds for minimal response (t), is expressed for con-

TABLE I.

Wavelength (mμ)	Width of waveband (mμ).	Relative intensity (arbitary units).	Wheal. Duration threshold exposure (sec.).	Wheal. Threshold dose : ($\log_{10}$) ($I \times t$)	Early erythema. Duration threshold exposure (sec.).	Early erythema. Threshold dose : ($\log_{10}$). ($I \times t$)	Late erythema Duration threshold exposure (sec.)	Late erythema Threshold dose : ($\log_{10}$) ($I \times t$)
250	3·0	28	—	—	600	4·99	30	2·91
260	—	64	—	—	600	4·58	120	3·88
270	4·6	110	—	—	600	6·60	30	3·52
280	—	260	360	4·98	As for wheal		5	3·13
290	6·4	270	240	4·82	30	3·91	10	3·43
300	—	418	120	4·71	10	3·63	10	3·63
310	8·0	625	360	5·35	60	4·57	30	4·27
320	—	1000	180	5·10	As for wheal		300	5·50
330	9·8	1250	180	5·35	,, ,, ,,		360	5·65
340	—	1690	180	5·48	,, ,, ,,		360	5·79
350	11·4	1060	240	5·39	,, ,, ,,		—	—
360	—	850	300	5·40	,, ,, ,,		—	—
370	13·0	1970	240	5·67	,, ,, ,,		—	—
380	—	2330	900	6·32	,, ,, ,,		—	—
390	15·0	3480	900	6·49	,, ,, ,,		—	—
400–450 violet	—	4400	—	—	900	6·42	—	—
490–530 blue	—	5900	900	6·76	As for wheal		—	—
530–560 green	—	9900	900	6·95	,, ,, ,,		—	—
600–650 orange	—	7920	—	—	900	6·82	—	—
700–750 red	—	7920	—	—	—	—	—	—
900–1000 infra-red	—	6350	—	—	—	—	—	—

venience in logarithmic units. It is assumed that the so-called "law of reciprocity" (intensity × time = a constant) holds for dosage with monochromatic light. Within limits this seems to be true of dosage at 300 mμ for the whealing reaction ; the interposition of filters at the entrance slit of the monochromator to reduce the intensity of the light to about one-tenth led to the exposure time for the threshold dose being prolonged ten times (Blum and West, 1937).

RESULTS.

Three kinds of response were seen : early erythema, an urticarial wheal and delayed erythema (sunburn reaction). Action spectra for these responses are shown in Fig. 1.

Early erythema.—When early erythema appeared it was seen immediately after exposure, or within one or two minutes thereof, and when wheals formed it always preceded them. Our patient developed early erythema at 290, 300 and 310 mμ, a response we have never seen in controls at these wavelengths, so that in this spectral region the reaction seems to be abnormal. She also showed early erythema at 400–450 mμ, and this we have not seen in controls either. We have, however, noted it on several occasions following exposure to wavelengths between 360 and 390 mμ, so that the reaction may not really be abnormal.

Furthermore, the doses which produced early erythema at these *longer* wave-lengths in normal subjects are not very different from those which elicited early erythema and wheals in our patient.

Whealing response.—Wheals following exposure to the threshold dose, or little more, took up to 10 minutes to develop fully. If the dose given considerably exceeded the threshold a wheal formed before the exposure was finished. Wheals lasted about 30 minutes and on subsiding left an indistinct erythema for the same time or longer. As mentioned above, erythema always preceded the

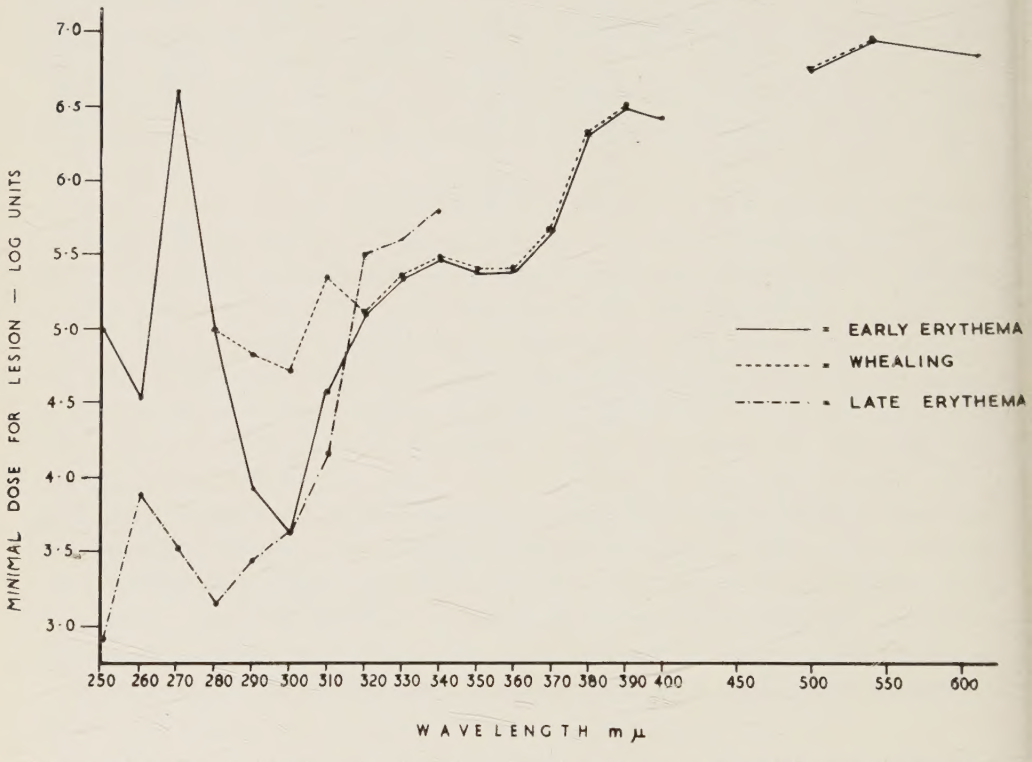

FIG. 1.—Dose in logarithmic units ; $\log_{10}(t \times I)$, where time (t) is in seconds, relative intensity (I) is in arbitary units.

formation of a wheal. No wheals were obtained at 270 mμ or at shorter wave-lengths (see Table I and Fig. 1).

It is to be noted that at 330 and 340 mμ the dose required to produce a wheal was less than that required for the *delayed* erythemal response (sunburn reaction), whereas from 310 down to 280 mμ it was at least 10 times larger. The most effective wave-length for wheal production was 300 mμ, which corresponds to the region of maximal sensitivity for the normal sunburn reaction.

That wheals are generally caused by light of these wave-lengths in natural conditions seems improbable, however. Long exposure to sunlight would be necessary to produce a wheal, and the ordinary delayed erythemal (sunburn)

reaction would occur. But the patient tells us this does not happen: a few minutes exposure to bright sunlight causes a wheal, and sunburn does not appear. Since the energy of the longer wave-lengths (330 mμ and upwards) is greater in sunlight than those of the sunburn spectrum (290–310 mμ) it is possible that it is the former which cause the whealing of this patient by the sun.

Violet, orange, red and infra-red light failed to produce a wheal in the present experiments, whereas previously they did (Porter, 1954). This may be due to a reduction in the severity of the disease, a point about which the patient was quite convinced. Urticaria was, however, caused by exposure to blue and green light.

Delayed erythema (*sunburn reaction*).—This was seen in the range 250–340 mμ. It developed within about 6 hours of exposure with wave-lengths between 270 and 340 mμ and generally faded within 24 hours. With wave-lengths near 250 and 260 mμ it appeared and faded somewhat earlier. The upper limit of this response has been shown to be at about 320 mμ (Coblentz, Stair and Hogue, 1932), and we have confirmed this in general. We have, however, occasionally produced this reaction at 330 and 340 mμ and above in normal persons.

Generally speaking, the energy required to produce delayed erythema was less than that needed to form a wheal. At 320, 330 and 340 mμ, however, this relationship was reversed, greater energy being required to cause delayed erythema than whealing. In a single instance the minimal dose for early and delayed erythema was the same in our patient. An exposure of 10 seconds at 300 mμ caused erythema within 2 minutes of the test's completion (early erythema). This faded in about half an hour and the site of exposure showed nothing for about 6 hours, after which the delayed erythemal reaction began to be evident.

Direct pigmentation.—This was sought for immediately after each series of tests, and again an hour later, by examination through a glass slide pressed on the skin surface to obliterate coincidental erythema. It was not seen in our patient, however; perhaps this was due to insufficient length of exposures, for high doses were not given with the intention of producing this reaction, because of the discomfort incurred from whealing. The absence of this reaction, allegedly a common feature of photodermatoses, is thought by some workers to be of aetiological importance. However, it is often absent in normal subjects (Wiskemann and Wisser, 1956).

Discussion.

Relation of early erythema to whealing.—The dose required to provoke early erythema was sometimes identical with that needed to form a wheal; at other times it was much less. For instance, at wave-lengths of 320 mμ and longer we were unable to show separate threshold doses for each type of reaction, whereas

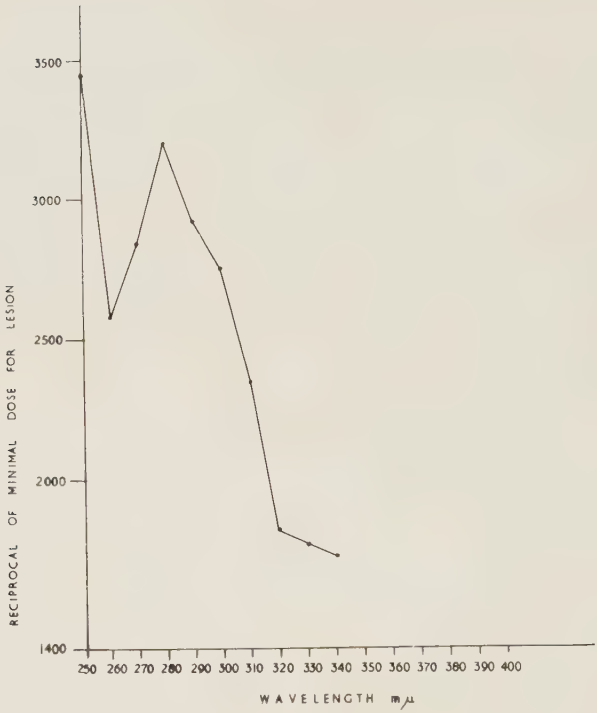

FIG. 2.—Derived "absorption" curve for delayed erythema, ordinates of Fig. 1 in reciprocals.

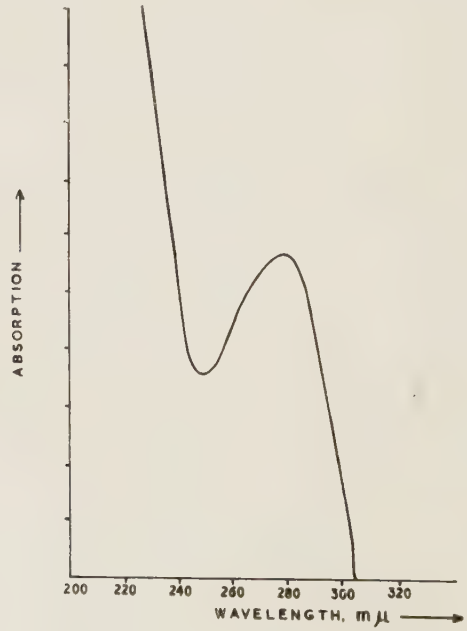

FIG. 3.—Typical "absorption" curve for protein in the ultra-violet spectrum.

at 290, 300 and 310 mμ early erythema was produced with doses of only about one-tenth of those required to cause whealing (Fig. 1): and early erythema occurred without whealing at wave-lengths below 280 mμ, however large the dose. These findings suggest that in the short ultra-violet region at least, early erythema and whealing may be due to different mechanisms. In this connection it is interesting to recall that vascular dilatation and increased permeability of the capillaries were recognized long ago as separate entities by Lewis (1926) and that this view has been confirmed recently by Holti (1955).

The differences in dose required to cause early erythema and whealing at wave-lengths of 310 to 290 mμ may, however, depend only on the amounts of erythema and wheal-producing substances released in the skin. Just as a small quantity of histamine gives rise to erythema only and a larger amount to erythema and a wheal, so might a small amount of active substance produce erythema only in our patient and a larger amount erythema and a wheal. If we assume that the amount of the agent or agents released is proportional to the dose of light, then a small dose of light might produce early erythema only and a large dose both early erythema and whealing.

Both erythema and whealing depend on changes in the blood vessels of the dermis, brought about by some agent with an action like that of histamine. In the *early erythema* reaction such a substance is probably formed by the action of light on epidermal cells, and reaches the blood vessels of the dermis by diffusion. This is suggested by the fact that certain light waves in the short ultra-violet region, which provoke early erythema in our patient, are absorbed entirely, or almost entirely, by the epidermis. It is known that very little light of 300 mμ or shorter wave-lengths reaches the dermis (Rottier, 1954). Yet even at 250 mμ early erythema was induced in our patient.

Photosensitizing mechanism.—Almost nothing is known of how wheals are formed in urticaria solaris, though it is commonly believed that " H-substance " is released at some stage in the process. All that can be said with certainty is that light waves are absorbed by some substance in the skin and this energy then initiates a chemical reaction which ultimately causes erythema and wheal formation. What the substance is that produces the reaction is not known, but it is interesting to speculate on its nature.

Light acts only when absorbed, so that when the active wave-lengths are known a search for a sensitizer may be made among substances absorbing the same wave-lengths. This applies not only to wheal formation, but to every reaction provoked by light. It is helpful, therefore, to convert the various action spectra of our patient into *absorption* spectra by expressing the ordinates as reciprocals; obviously, these curves must be treated with caution, for errors arising from scattering of light by the epidermis are not accounted for.

When this is done it will be seen that the absorption curve derived from the delayed erythema (sunburn) response in our patient (Fig. 2) corresponds

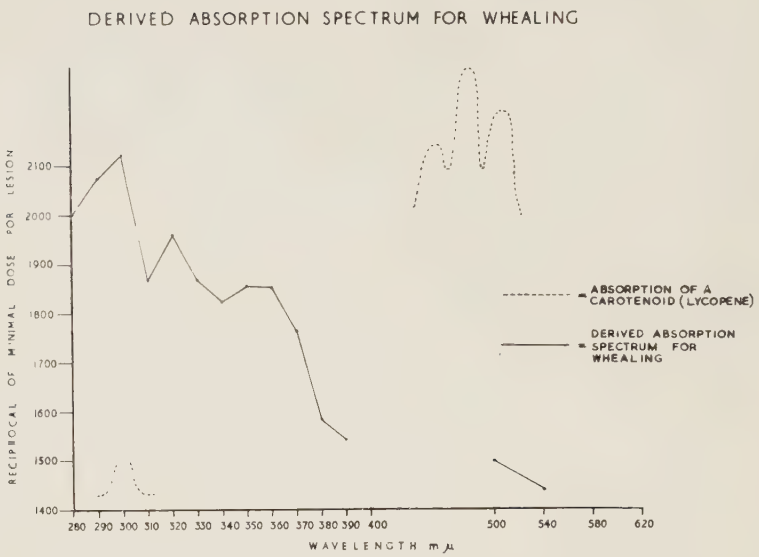

FIG. 4.—Derived "absorption" curve for whealing, ordinates of Fig. 1 in reciprocals. Part of an approximate absorption curve of a carotenoid (data from Zechmeister, 1944) is shown for comparison on the wave-length scale. Ordinates for the carotenoid are in an arbitary scale.

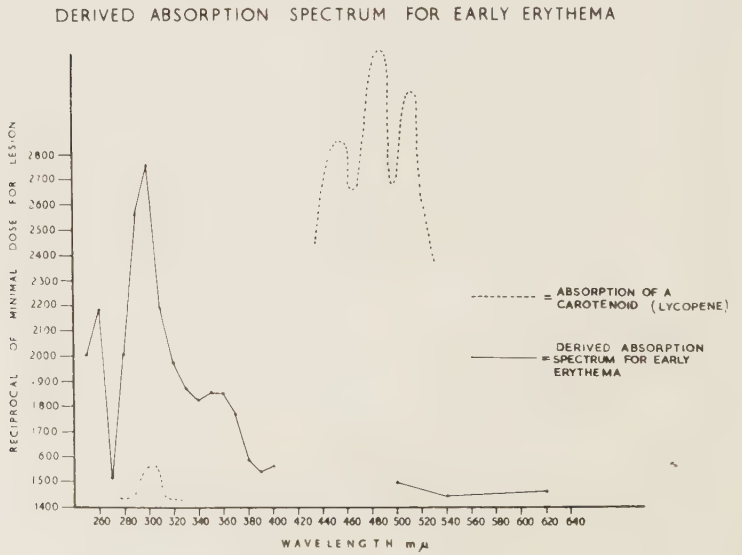

FIG. 5.—Derived "absorption" curve for early erythema, ordinates of Fig. 1 in reciprocals. Part of an approximate absorption curve of a carotenoid (data from Zechmeister, 1944) is shown for comparison on the wave-length scale. Ordinates for the carotenoid are in an arbitary scale.

closely to the ultra-violet absorption curve of protein (Fig. 3), showing a trough at 260 mμ with a steep rise in the shorter wave-lengths, a peak at 280 mμ and little absorption at longer wave-lengths. This agrees with the suggestion of Mitchell (1938) that sunburn is due to the action of light on protein. We did not, however, obtain such close correspondence in curves from all normal subjects.

When absorption curves derived from the whealing and early erythema responses are considered, we cannot arrive at any conclusion as to the identity of the photosensitive substance. That the two curves are identical down to 320 mμ (Figs. 4 and 5) suggests that the responses might be initiated by the same substance. The fact that the maxima of these two curves are near 300 mμ lends support to the suggestion that carotenes, which absorb characteristically in this region, might play some part. The carotenes, however, absorb much more strongly at 500 and 600 mμ (Blum and West, 1937) than does our patient's hypothetical photosensitizer. Further speculation would seem to be unprofitable at this stage.

To conclude, the whealing mechanism cannot be represented more fully with any certainty than as follows: Photosensitive substance + adequate light of suitable wavelength → (intermediate stages) → whealing substances. That oxygen is concerned seems likely on general considerations, but Blum, Allington and West (1938) obtained evidence against this in a case they investigated. The whealing substance is presumably histamine, and our patient's lesions are inhibited to some extent by antihistamines, as often obtains in this disease.

Summary.

A patient with urticaria solaris has been investigated with a monochromator.

The action spectrum for wheals extended from 280 to 390 mμ and from approximately 490 to 560 mμ.

The delayed erythemal (sunburn) reaction was essentially normal.

An early erythemal reaction was seen at wave-lengths 250–650 mμ.

The relationship between early erythema and whealing, and the photosensitizing mechanism are briefly discussed.

We wish to thank Professor W. D. Wright who designed and made our monochromator; St. John's Hospital for Diseases of the Skin for providing funds: the Medical Research Council for grants for purchase of apparatus; and Mr. Lunnon, F.R.P.S., Institute of Dermatology, for the diagrams.

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PRIMARY SYSTEMATISED AMYLOIDOSIS WITH STRIKING SKIN CHANGES*

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The patient described here was shown at a North of England Dermatological meeting and seen by many dermatologists, none of whom could suggest a diagnosis, and it was thought that she was unique. A correct diagnosis was made only after death, but on consulting the literature it was found that more than 145 cases of primary systematized amyloidosis had been described, though only 29 of them were diagnosed correctly before death. Brunsting and Macdonald (1947) refer to about 40 cases described since 1925 and in these only about a third showed skin lesions, but in no case except possibly that of Sappington, Davie and Horneff (1941) was the skin involvement as serious as in our patient. The only previous case with characteristic skin lesions reported in this country was that of Wells (1952) though Symmers (1956) recorded five cases, some of whom showed petechial haemorrhages. Nevertheless the picture is so striking that had we been familiar with the condition, a clinical diagnosis could confidently have been made, as in a similar case when presented at the meeting of the British Association of Dermatology in 1957.

Case Report.

A woman aged 62.

Family and previous history contained nothing of significance.

In May 1953 she had a bad motor accident with a fractured pelvis and legs for which she was off work for 6 months.

In August 1954 she began to develop purplish discoloration around her eyes and purpuric spots under the breasts, in the groins and axillae and across the abdomen. Some of these, particularly in the groins, developed into papillomatous lesions of a curious purpuric myxomatous character almost resembling bullae. At that time her general condition was good except for a tendency to tire easily. The skin lesions steadily progressed and she developed little papillomata around the eyelids and external auditory passages. By 1956, the eruption had become a nuisance because the lesions frequently oozed bloody serum, particularly in the groins, so that her bed linen was often blood-stained and she had discomfort on walking.

She had lost weight and was admitted to hospital in March 1956. A provisional diagnosis of acanthosis nigricans was made but a thorough investigation revealed no neoplasm.

In August 1956 she began to get short of breath and developed oedema in the legs. For a period of some months she had severe pain in the right hip. She was admitted to hospital again in January 1957 with dyspnoea and marked oedema of the legs. A skiagram showed changes in the lung, possibly due to congestion, but they might have been caused by early secondary carcinomatous deposits. There was also collapse of

* This paper was read at the May 1958 meeting of the Section of Dermatology of the Royal Society of Medicine.

several of the lower thoracic vertebrae. She improved considerably on aureomycin and iron by mouth, and was allowed to go home after a fortnight. Her condition remained fair with some oedema of the legs and dyspnoea till March 1957, when she fell in her home and died two days later.

Skin lesions. –These first appeared as purpuric spots, particularly in the axillae and groins and under the breasts. Some of these faded in the ordinary way, but others persisted and became papular. Many of the papules were pin-head sized, but others, particularly in the groins, were much larger and tended to run together into plaques (Fig. 1). Their colour varied from waxy yellow through all shades of red to a dusky purple. The early lesions were soft and translucent and almost suggested vesicles.

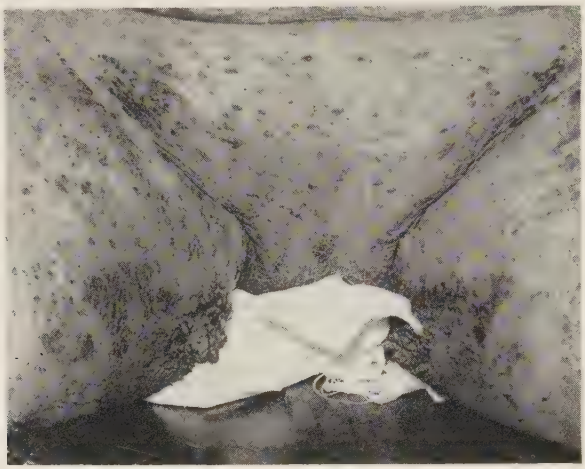

Fig. 1.

The larger fleshy plaques in the groins had a myxomatous feel. In both axillae there were numerous skin tags like filiform warts. The lesions on the eyelids were rather firmer and up to 5 mm. in diameter affecting chiefly the inner halves (Fig. 2) : similar lesions round the external auditory passages eventually obstructed the openings so that the tumours had to be curetted away to improve her hearing. The lesions under the breasts and in the groins bled easily and towards the end became rather offensive ; on two occasions considerable areas were curetted off, but they regrew fairly quickly. The limbs were spared except for a few small purpuric papules around the knees and elbows. At no stage did she have macroglossia.

Investigations. Numerous tests were carried out and often repeated over a period of 2 years so that only the salient points will be recorded here.

Blood counts.—These never showed any marked variation from normal except mild secondary anaemia of 77% in January 1957, which rapidly returned to normal on giving iron. A typical count was : Hb 96% R.B.C. 4·78 million per cu. mm., W.B.C. 5800 per cu. mm., polys. 75%, lymphs. 24%, monos. 1%, platelets 200,000 per cu. mm. Bleeding time 2 min. Clotting time 4 min. 45 sec. E.S.R. 12 mm./1 hour.

Serum Proteins.—These were always within the normal range. Typical figures were total protein 5·5%, albumin 3·2%, globulin 2·3%, A/G. ratio 1·4. Unfortunately it was not possible to obtain an electrophoretic analysis. The serum electrolytes were normal. Serum calcium 10·8 mg. per 100 ml.

Urine.—Albumen was present but no sugar. Following the discovery of the collapse of several vertebrae, Bence-Jones protein was found. Kepler's test suggested the possibility of Addison's disease (Factor $A - 21$) but this was not confirmed by the

later progress of the disease. Thorn's test was normal. Urinary 17-keto steroids normal. Histological investigations are described below.

Treatment.—No treatment including prednisone and corticotrophin had any permanent effect on the progress of the disease, though prednisone seemed to combat the bleeding tendency to some extent. Aureomycin improved the condition of her lungs, probably by dealing with secondary infection. The oedema which appeared towards the end was helped to some extent by mercurial diuretics. Local treatment with both x-rays and Grenz rays had little effect. Considerable areas of the fleshy plaques in the groins were curetted off and this temporarily made walking more comfortable, but the lesions returned fairly quickly. Similar treatment was performed on the external auditory passages to improve her hearing and release dammed-up secretion.

Autopsy report.—The gross findings on autopsy were strikingly few apart from the skin. The heart was a little enlarged and its muscle was pale, with a peculiar dry

Fig. 2.

and rather brittle firmness. The lungs were firm and somewhat congested. The liver and spleen appeared normal. There was some osteoporosis of the spine and patchy lesions in the skull. The most striking change was in the upper part of the small intestine which was thickened and firm and had an unnatural rigidity so that it resembled a plastic hosepipe. Histological examination showed widespread infiltration with amyloid. This was especially marked in the heart lungs and small intestine, but was also found in the portal tracts of the liver, the small vessels of the kidney and in the skin.

Discussion.

The striking feature of this case was the skin involvement. Brunsting and Macdonald (1947) gave the following description :

" Cutaneous and mucosal lesions commonly appear in the form of yellowish patches on the skin simulating diffuse xanthoma, with involvement of the face about the eyelids, first of all with discrete and coalescing papules, semitranslucent and of a waxy, amber colour. Ecchymosis and purpura appear concomitantly in the sites of the eruption."

Other authors also emphasize the waxy colour and the shiny translucent appearance which strongly suggests a vesicle (Michelson and Lynch, 1934). The description closest to our picture is that of Sappington *et al.* (1941), viz., " these lesions were observed as yellowish brown elevations or infiltrations involving both upper and lower eyelids on both sides ; as yellowish brown

thickenings narrowing the lumina of the auditory canals almost to complete closure ; and in the groins not as nodular or glandular enlargements, but as wide areas of infiltration extending around to the rectum." Here, as in several other instances a provisional diagnosis of xanthoma was made and a biopsy was only diagnosed as "colloid degeneration of the skin". This failure to diagnose amyloidosis from the skin biopsy is not infrequent and occurred in our case. One of the reasons is that the amyloid present in this condition frequently stains atypically. Brunsting in commenting on this said that he obtained an intense metachromatic colour only when he used methyl violet followed by 5% oxalic acid solution.

Our patient showed an exaggerated haemorrhagic tendency so that many of the papules were purpuric rather than waxy and the lesions under the breasts and in the groins showed a distressing tendency to bleed on the slightest friction. She developed under the breasts and still more in the groins and perineum, similar wide areas of infiltration, but these were covered with very numerous fleshy myxomatous papillomata up to half an inch long and often laterally compressed. Numerous skin tags in the axillae may or may not have been part of the picture.

Other features have been described by different authors. The commonest and that which often suggests the diagnosis, is macroglossia. This was lacking in our patient. In some cases the palms have been glistening and studded with small papules and the finger tips red and swollen. Gottron described scleroderma-like infiltration on the scalp, face and buttocks with more nodular lesions over the abdomen. In one of Koenigstein's cases absorption was followed by scarring of a polycyclic type.

As Symmers (1956) and other authors have shown, primary amyloidosis can manifest itself in many ways, e.g., heart failure, peripheral neuropathy, obscure symptoms with haemorrhage or pulmonary distress and the diagnosis has only been made *ante mortem* in one case in five. When skin lesions are present, diagnosis should be possible much earlier. In our patient the pulmonary distress and secondary heart failure were so marked and the radiographic picture so suggestive that we confidently anticipated finding a pulmonary neoplasm at autopsy. The collapse of several thoracic vertebrae was consistent with malignant secondary deposits, but might also have been caused by the steroid therapy ; it has however been described in primary amyloidosis. The finding of Bence-Jones protein in the urine in the absence of evidence of myelomatosis radiologically or in the blood chemistry should raise the suspicion of amyloidosis. It is not, however, always present (Brunsting and Macdonald) and the urine must be examined for it repeatedly. The severe pain which she had in one hip and later in one knee is rather characteristic of the disease and is mentioned by Brunsting and Macdonald who attribute such joint and muscle pains to the extensive distribution of the amyloid.

As the purpose of this report is to describe a clinical picture, no attempt will be made here to discuss pathogenesis of the condition. Amyloidosis, myeloma and Bence-Jones proteinuria occur together with sufficient frequency to suggest that they are part of the same systemic process : the exact nature of this and the origin of the amyloid is however as yet undetermined.

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THE EFFECTS OF LOCAL COOLING ON THE CUTANEOUS BLOOD FLOW IN NORMAL AND ERYTHROCYANOTIC PATIENTS.

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In our previous work using radioactive sodium, it was shown that, under conditions of maximum vasodilatation, the local blood flow in the skin of the affected area in erythrocyanotic patients was slower than in normal subjects (Garretts *et al.*, 1958). The disease involves the exposed area of the lower legs in otherwise healthy young women; while one school (Klingmüller and Dittrich, 1930; Lewis, 1936; Marchionini, 1954; Dore and Stott, 1922; Parkes Weber, 1925) considered the condition to be the result of damage to the vessels from chilling, other authors did not attach so much importance to the part played by cold (Goldsmith, 1936; Telford, 1933, 1937; and Boyd, 1950).

From our work we considered either that there was an abnormal vascular response to cold, or that the vessels were hypoplastic, as suggested by Boyd (1950). We believed that the study of the vascular responses to heating and cooling in normal and erythrocyanotic patients would be of value.

Lewis (1930) was the first to describe the cutaneous vascular response in a finger after immersion in melting ice. An initial vasoconstriction was followed after some minutes by a sudden vasodilatation; thereafter further periods of constriction and dilatation followed in a cyclical manner.

These findings by Lewis were deduced from changes in temperature recorded from adjacent, relatively uncooled, skin of the finger. It is much more difficult to record the blood flow in the area of skin actually cooled, and obviously skin thermometry cannot be used for this purpose. We therefore modified the method previously described (Garretts *et al.*, 1958) to enable us to measure the difference in radio-sodium uptake between warmed and cooled skin.

Temperature has a marked effect on the absorption rate of ^{24}Na as normal saline; the other factors that control the absorption of saline from the superficial dermis have already been reviewed (Garretts *et al.*, 1958). Our earlier work was performed at 37° C. in order to measure blood flow in patients when their vessels were in a state of maximal dilatation.

Method.

A technique was devised whereby a small area of skin could be cooled while the rest of the skin of both lower limbs was maintained at 37° C. with a heat cradle.

In order to cool a localized area of skin, a copper cooling chamber, 6 cm. × 4 cm. × 1 cm., with outlet and inlet tubes, was applied to the leg. The upper surface of the chamber was covered with thin plastic, and small loops on the sides of the chamber allowed it to be strapped in position on the limb.

The patient lay supine on a couch with the legs, supported by sandbags, under a heat cradle. A constant site, 3 in. above the ankle on the anterior aspect of the leg, was chosen for investigation. This was covered by the cooling chamber which was loosely applied to the skin with the strap. A thermocouple was placed under the chamber, and another was applied to the adjacent uncovered skin. The inlet tube was connected through a tap to a reservoir of water containing melting ice; the outlet tube was allowed to run to waste.

Approximately 1 microcurie of ^{24}Na as normal saline was taken up in a Mantoux syringe and the dose was made up to 0·05 ml. with sterile normal saline. The Geiger counter (GM 4 end-window tube) was then fixed directly above and in contact with the plastic cover of the cooling chamber. The counter was connected to a Burndept (BN. 102) rate meter and the readings were transferred to a pen writing recorder (Elliott).

The heat cradle was then switched on, and the temperatures of the lower limb and of the skin immediately beneath the cooling chamber were recorded with a Cambridge skin temperature thermometer. The temperature recorded by the thermocouple beneath the chamber was the resultant of the skin temperature and the cooling surface. When the skin temperature of the lower limbs was stabilized at 37° C. (after about 20 minutes) an intracutaneous injection of 0·05 ml. of normal saline containing the dose of ^{24}Na was given into the chosen site. The chamber was then replaced over the injection site, and the strap again loosely adjusted to bring the chamber in contact with the skin with the minimum of pressure. The counter was replaced and the rate of removal of ^{24}Na recorded. A sufficient length of tracing was obtained so that $T_{\frac{1}{2}}$ at 37° C. could be determined. The tap of the cold water reservoir was then opened, and water at 4° C. was allowed to circulate through the chamber. The temperature of the skin immediately beneath the cooling chamber was thus rapidly lowered, while the legs were maintained at 37° C. by the heat cradle. This arrangement allowed the sudden cooling of a given area of skin without interfering with the continuity of the readings. Thus both during heating and cooling, the ^{24}Na clearance rate was recorded as a continuous graph. The values so obtained were plotted logarithmically against time. Any change in the rate of sodium absorption as a result of cooling was shown by a change in the slope of the curve. The absorption rate was expressed as a value for $T_{\frac{1}{2}}$, the time taken in minutes for the count over the injection site to fall to one half of the initial level.

Results.

Effect of Local Cooling in a Normal Male.

A normal patient (male, aged 37) was used and the results obtained are shown graphically in Fig. 1.

During heating at 37° C., a $T_{\frac{1}{2}}$ value of 11 was recorded. During the cooling period the $T_{\frac{1}{2}}$ value was 38, the graph being almost a horizontal straight line.

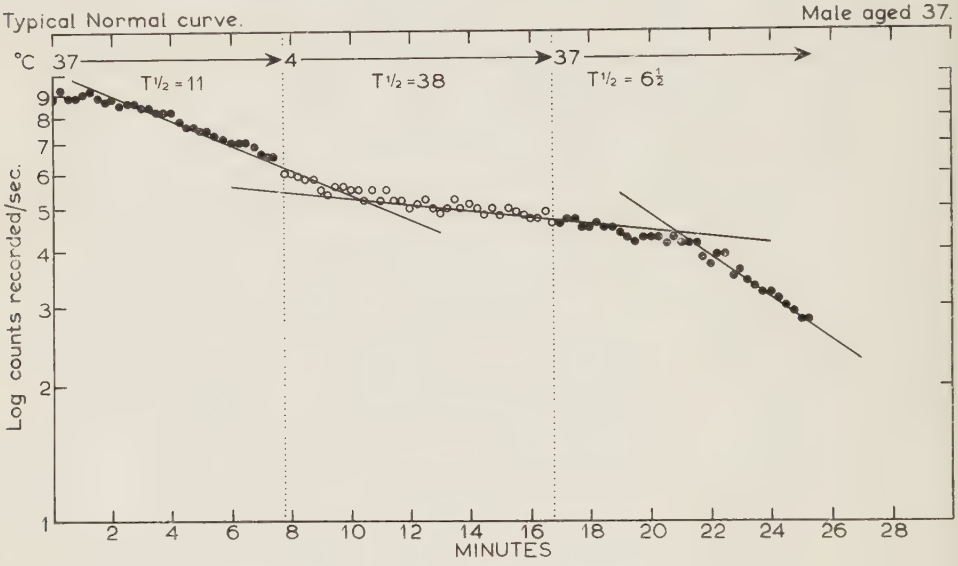

Fig. 1.

On raising the temperature by replacing the cold water in the chamber with water at 37° C., the absorption rate was increased to above the original value ($T_{\frac{1}{2}} = 6\frac{1}{2}$).

Thus it was clearly demonstrated that locally cooling an area of skin reduces the rate of radio-sodium absorption, and that this can be restored to its previous speed by reheating.

Effect of Local Skin Cooling on Normal and Erythrocyanotic Females.

Six cases of erythrocyanosis and 6 normal controls of comparable age were studied.

The typical curve obtained in the 6 normal controls is shown in Fig. 2. Soon after cooling was begun, the rate of radio-sodium absorption was considerably decreased, and in some cases absorption was virtually arrested. This decrease in absorption rate was similar to that obtained in a normal male (Fig. 1).

The values for the controls are shown in Table I.

TABLE I.

Subject.	$T_{\frac{1}{2}}$ at 37° C.	$T_{\frac{1}{2}}$ during cooling.	Percentage change in absorption rate.
1	5	8	60
2	9	26	190
3	7·5	20	170
4	10	33	230
5	7	11·5	64
6	7·5	18·5	160

Average percentage decrease of the radio-sodium absorption rate during cooling = 145.

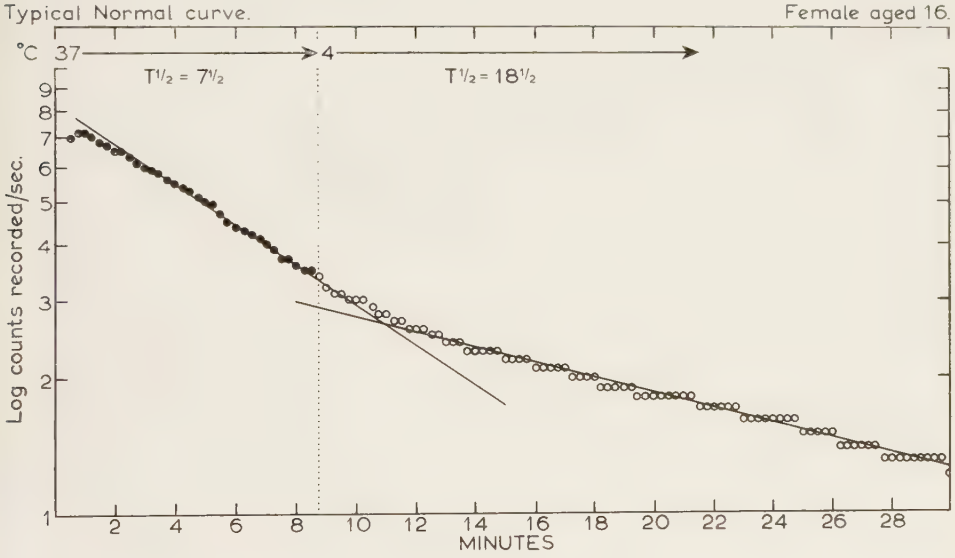

FIG. 2.

The erythrocyanotic group showed no alteration in the radio-sodium absorption rate as a result of local cooling (Fig. 3). The values obtained for $T_{\frac{1}{2}}$ during heating and cooling are given in Table II.

TABLE II.

Subject.	$T_{\frac{1}{2}}$ at 37° C.	$T_{\frac{1}{2}}$ during cooling.	Percentage change in absorption rate.
1	9·5	9·5	Zero.
2	7·5	9	20
3	5	6	20
4	6	6	Zero.
5	10	10	..
6	9	9	..

Average percentage decrease of the radio-sodium absorption rate during cooling 7.

Two additional patients, both clinically mild cases of erythrocyanosis, were examined by this technique and gave normal results.

One other case, though clinically normal with no complaints regarding her circulation, gave a pattern of response more like the erythrocyanotic group ($T_{\frac{1}{2}}$ at 37° C. = 7·5 : during cooling $T_{\frac{1}{2}}$ = 9). Moreover after her leg had

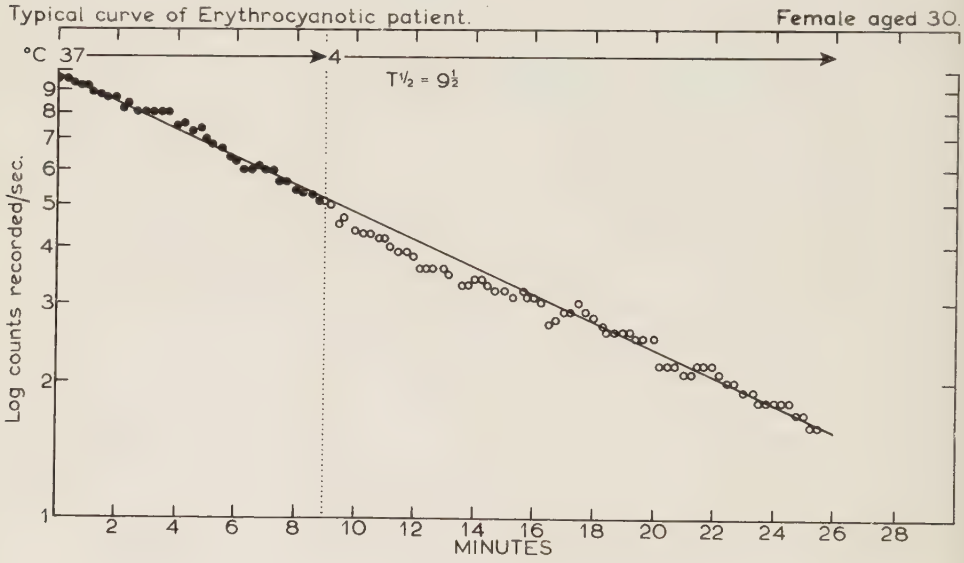

Fig. 3.

been cooled, the skin showed a perifollicular distribution of dilated cutaneous vessels filled with venous blood such as is often seen in mild cases of erythrocyanosis. The significance of these three anomalous cases is discussed later.

Discussion.

It was considered that any change observed in the ^{24}Na absorption rate as a result of cooling was probably due to vasoconstriction. We therefore thought it permissible to assume that the decrease in absorption rates on cooling which was observed in some of the patients was an expression of the degree of vasoconstriction induced. It is unlikely that the other factors influencing the rate of removal of radio-sodium would be greatly altered by reducing the skin temperature to the levels attained in this investigation.

Because the copper chamber could not be applied to the skin at a constant pressure for all the patients and controls, the results obtained are *not* comparable with each other. During an individual experiment, however, the pressure of the box remained constant throughout the whole period, so that the results obtained at maximum dilatation during the heating phase of the experiment can be strictly compared with those obtained during cooling, and the percentage variations of the clearance rates in the two groups of patients can be compared.

In the present series the variation in the pressure of the copper box on the

skin explains why no significant differences between normal and erythrocyanotic patients during the heating phase of this investigation have been demonstrated, whereas in the series previously reported differences were shown (Garretts *et al.*, 1958).

The normal male patient showed a greater rate of ^{24}Na clearance on rewarming the area of skin (Fig. 1). This may be explained by assuming that the initial heating to 37° C. had not invoked maximum vasodilatation, and that on rewarming after cooling, the reflex vasodilatation was in excess of the initial response, and therefore the rate of ^{24}Na absorption was greater.

It appears from our results that erythrocyanotic patients do not respond by vasoconstriction when a cold stimulus is applied to the affected region. This lack of response, together with a general slow circulation to the skin of the legs as already reported (Garretts *et al.*, 1958), could account for the low skin temperature of the affected areas and for the clinical appearance of dilated superficial cutaneous blood vessels filled with reduced blood.

The two mild cases of erythrocyanosis showing the normal pattern of response, and the normal patient with an erythrocyanotic pattern suggest that the erythrocyanotic state is not clear-cut ; probably there exist all gradations between the normal and the erythrocyanotic. The complete lack of response to local cooling described in this paper possibly only occurs in the most severely affected cases. The patients reported in the present series (Table II) all had severe erythrocyanosis.

Summary.

1. A method is described of studying the response of the skin capillaries to changes in temperature in a small area, while the general limb surface temperature remains constant. This method permits direct measurements and comparisons to be made.

2. Cases of erythrocyanosis have been demonstrated to have two vascular abnormalities :

(i) Reduced skin blood flow compared with normal (previous work).

(ii) Inability of skin blood vessels to constrict on exposure to cold.

We should like to thank Dr. W. N. Goldsmith for his interest and helpful criticism, and Mr. V. K. Asta for the figures.

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ROYAL SOCIETY OF MEDICINE

SECTION OF DERMATOLOGY.

President—Dr. John T. Ingram.

15 May 1958.

A short paper entitled " Primary Systematized Amyloidosis with Striking Skin Changes " was read by Dr. F. F. Hellier and is published elsewhere in this issue.

Epidermolysis Bullosa (Acquired).—Dr. Brian F. Russell.

A woman, aged 24, a goatherd.

History.—At the age of 12 years, scoliosis was noted. At 18, she began to suffer from diarrhoea—six motions a day, occasionally bloody. At age 20, a hot water bottle burn at the elbow did not heal and spread with blistering. The skin began to rub off easily. She does not notice any seasonal change but the skin may blister on exposure to the sun. Menstruation is regular. Tonsillitis and septicaemia at the age of 3½ years. Internal semi-lunar cartilages of knees removed at the age of 13 and 15.

Examination.—Thickened thumb nails (these have been shed). Many epidermal cysts on hands, elbows and knees with atrophic scarring. Blisters on the thumbs and ankle. Nikolsky's sign positive. Complete dentures (the teeth are said to have crumbled away). Scoliosis. No hyperelasticity.

Investigations.—Urine normal. B.P. 125 80 mm. of mercury. Erythematous reaction obtained with a half-erythema exposure to ultra-violet light. Urine—no porphobilinogen or porphyrins detected on 3 occasions. Faeces—no porphyrins detected. No amoebae, cysts, ova, or other parasites or pathogenic organisms recovered. Fat content (dried faeces)—17·2 g.%. Liver function tests normal. Hb 71%, white count normal, E.S.R. 2 mm. in 1 hr. X-ray examination—barium meal : no evidence of ileitis. Barium enema : changes consistent with ulcerative colitis. Skin histology—subepidermal cleavage, epidermal cysts, elastica absent in upper dermis. Foreign body granuloma around portion of hair shaft. Hyperkeratosis, follicular plugging and focal lymphocytic infiltration.

Dermatitis Repens and Psoriasis.—Dr. I. Martin-Scott.

A man aged 49, a grocer.

History.—In November 1957, the patient noticed brown discoloration of some finger nails which started at the free border and slowly spread down to the cuticle and a purulent perionychia developed. Two weeks later, the right great and middle toes became involved and he developed an effusion in both knee joints. He had had slight soreness of the glans penis since August 1957, but no dysuria. When examined in December 1957, two further fingers were affected and he had developed three small psoriasiform lesions on the trunk, which he said had started as blisters. He was then admitted to hospital.

Past health.—No serious illnesses or veneral infection. Haemorrhoidectomy 1955.

Examination (31.xii.57).—General physical examination revealed no abnormality except a slight effusion in the right knee joint.

Several of the nail plates were brown on the lateral half and others were being shed by the development of subungual masses of horn. In some there was bolstering of the nail folds and a purulent discharge. Where the process had spread on to the skin of his fingers the skin was dark red, dry and denuded and the affected area was sharply marginated. There were no pustules. There was slight inflammation of the coronal sulcus of the penis, but no urethral discharge. Three thickened scaly oval plaques, 3 cm. in diameter were present on the trunk and a smaller one on the right forearm. The scalp, oral mucosa and conjunctivae were healthy.

Investigations (December 1957).—The pus from fingers and toes was cultured on five occasions and each time *Proteus vulgaris*, resistant to antibiotics except streptomycin, was cultured. Culture of nail plates was negative for fungus. E.S.R. 34 mm. in 1 hr., Hb 96%, W.B.C. 10,900 per cu. mm. (70% polymorphs), W.R. and Kahn negative, gonococcal complement fixation test negative, serum uric acid 5·3 mg.%. Prostatic smears showed pus cells, but no organisms, a catheter specimen of urine was normal and skiagrams of the knee joints showed no bony changes and of the chest no abnormality.

Biopsy of side of finger (24.i.58, Dr. Charles Pike): "The epidermis shows acanthosis with marked elongation of the rete pegs. Parakeratosis is marked. Polymorphs are present throughout the epidermis, but are maximal in the parakeratotic layer where they form Monro's abscesses. There is some intercellular oedema of the basal layer of the epidermis. The oedematous corium shows an infiltration by lymphocytes, plasma cells and eosinophils. Micro-organisms were not seen."

Treatment.—Systemic: In December 1957 a course of oral penicillin V, which upset him, streptomycin 1 g. daily for two weeks, and sulphamezathine 1 g. 6-hourly for two weeks. From February till April 1958 he was given prednisolone 5 mg. *b.d.* and during the last month this was stopped and liq. arsenicalis 5 minims *t.i.d.* was given.

Local: Initially he was given antibiotic and antiseptic applications. Since early February, the sepsis has gone and he has had tar and dithranol ointments.

Progress.—During his 5 weeks' stay in hospital there was no extension of the disease process and the patches on his body cleared up. Since this time, two more toes have become involved and the fingers and toes present the typical appearance of dermatitis repens. In February 1958, he suddenly developed generalized guttate and exudative psoriasis of the trunk and arms.

Postscript (July 1958).—Following the local application of Ung. dithranolis 0·5%, and Vitamin D_2 50,000 units *b.d.* by mouth, the skin has completely cleared, but the nail plates are still thickened.

Comment.—In this case the clinical condition called "dermatitis repens" started in the nail plates and not as a perionychia. It is believed to be an exudative type of psoriasis and not a separate infective dermatosis.

Darier's Disease Treated by Dermabrasion.—Dr. D. A. Larnder (for Dr. S. C. Gold).

A woman aged 25. Her parents, two sisters and one brother are unaffected. The parents are not related.

She has suffered from widespread Darier's disease since the age of 7 years. From 1940, she had a variety of treatments, including sulphonamides, cortisone, T.A.B. vaccine, numerous courses of vitamin A, ultra-violet light and Grenz ray therapy, with little appreciable or lasting effect. Local therapy included keratolytics, poultices and antibiotics.

It was noticed, however, that the sites of two previous biopsies had remained clear and this prompted the idea of dermabrasion. A trial area on her left thigh

was therefore planed in February 1958 and it has remained clear for over three months (Fig. 1).

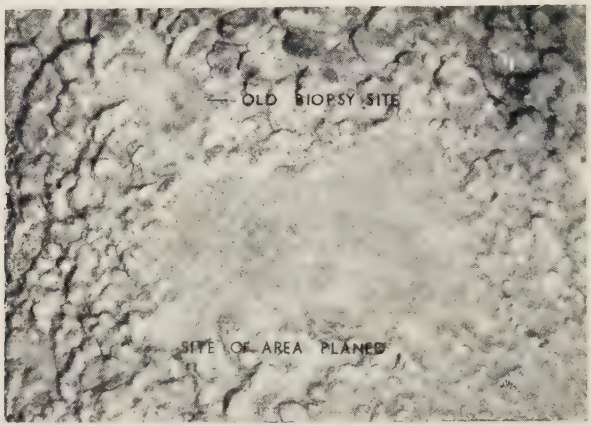

Fig. 1.

The following cases have been reported in *Proc. R. Soc. Med.*, **51**, 929 :

Lupoid Rosacea.—Dr. Brian F. Russell.

Tuberculosis Verrucosa Cutis (?Waterborne Acid-fast Bacillus Infection) —Dr. J. S. Pegum.

Eosinophilic Granuloma of the Face.—Dr. I. Sarkany (for Dr. Louis Forman).

The following cases also were shown :

?Hypertrophic Lupus Erythematosus.—Dr. Clifford Evans.

Acne Agminata.—Dr. W. Frain-Bell (for Dr. F. Ray Bettley).

Case for Diagnosis. ?Incontinentia Pigmenti.—Dr. J. H. Allison.

Hansen's Disease Simulating Lupus Vulgaris.—Dr. J. Scopes (for Dr. R. T. Brain).

Hypergammaglobulinaemia, Pruritus and Ichthyosis.—Dr. C. M. Ridley.

Juvenile Dermatitis Herpetiformis.—Dr. I. Sarkany (for Dr. L. Forman).

Turban Tumour.—Dr. R. G. Howell and Dr. S. Bernstein.

7 June 1951 (Leeds).

Maffucci's Syndrome and Hypertension.—Dr. M. Malden (for Dr. R. E. Church).

A man aged 45, steel examiner.

History.—At the age of 12, he noticed deformities of fingers and lumps on his hands and forearms. At 22, the diagnosis of Kaposi's sarcoma was made and radiotherapy was given. This has led to radiation burns and necroses. During the past 25 years the deformities of fingers and limbs have not altered much but the subcutaneous nodules have increased both in size and number. They have not caused him great inconvenience and he remained in full employment until about five months ago when, following an injury, he developed a gravitational ulcer which has now healed. Two months ago he suffered a cerebrovascular accident which resulted in left-sided hemiparesis. On admission he was found to have hypertension and papilloedema. Extensive investigations failed to reveal the presence of an

intracranial space-occupying lesion or any evidence of renal damage. In view of this, hypotensive therapy was initiated.

Examination.—Left hand –firm subcutaneous nodules on the forefinger and a bluish angiomatous lesion of the little finger. Right hand—ring and little finger amputated. There are blue angiomatous nodules on the dorsum of the right hand. Forearms—scattered radium burns and subcutaneous angiomata especially around the wrists, with bowing of the right forearm. Feet—hyperkeratosis of the heels with a blue angiomatous element on the left heel. There are also scattered subcutaneous angiomata on the trunk, the right ear and the left side of the mouth. The blood pressure varies from 260 150 to 210 120 mm. and there are residual signs of mild left-sided hemiparesis.

Investigations.—Skiagrams: Hands—multiple cystic areas in the phalanges producing deformities (Fig. 1). The soft tissues show small circular areas of calci-

Fig. 2.

fication in phlebectasia. Chest—lung fields clear. Cystic changes in the left scapula. Feet—multiple cystic changes similar to those in the hands. I.V.P.—normal. E.C.G.—left ventricular hypertrophy and strain. Air encephalogram normal. Urine concentration and dilution test and urea clearance, normal.

Histology.—Section shows an angioma with a large calcifying thrombus.

Spontaneous Hypoparathyroidism with Generalized Moniliasis.—Dr. S. T. Anning.

A schoolboy aged 14.

History.—Laryngismus stridulus developed in the first few months of life. He was found to have a low serum calcium, high serum phosphate and normal alkaline phosphatase. He was diagnosed as a cause of spontaneous hypoparathyroidism and treatment with calciferol 50,000 units daily controlled the clinical manifestations. At the age of 7, further episodes of "choking" and cyanosis occurred and he had some muscle twitching in the arms. The dose of calciferol was increased to 50,000 units *b.d.* and no further attacks occurred. The fungal infection of the skin and nails

has been present for several years. He has otherwise been healthy though somewhat retarded in intellectual development.

Examination.—There is extensive monilial infection of the skin, especially the hands and feet and of the nails. Both lenses show fine white punctate and flaky opacities in the deep subcapsular and cortical zones, with anterior " Y " sutural opacities on slit-lamp examination (cataracta hypoparathyroidea). There are no skeletal abnormalities and no other positive findings.

Investigations.—Radiographs of skull and long bones are normal. Serum calcium, 7·4 mg. per 100 ml., serum phosphate, 7·7 mg. per 100 ml., serum alkaline phosphatase, 11 K.A. units per 100 ml. Five day fat balance—faeces contain 5 g. fat per 100 g. faeces. Urea clearance 78% normal function. Blood count—Haemoglobin, 87% (12·9 g. per 100 ml.). R.B.C. 4,270,000 per cu. mm. W.B.C. 8400 per cu. mm. *Candida albicans* has been demonstrated in the skin, nails, mouth and faeces.

Treatment.—The monilial infection has been treated with nystatin both orally and locally over periods of many weeks, but has shown only transient improvement.

Discussion.—The question of fibrocystic disease of pancreas was raised (Dr. Hare). Recovery on diodoquin with relapse on discontinuing the drug had been observed (Dr. Lyon). Cases with granulomata and lesions on scalp like cutaneous horns had responded (Dr. Wells).

The following cases have been reported in *Proc. R. Soc. Med. :*

Madura Foot (Mycetoma).—Dr. S. T. Anning.

Lymphocytic Lymphoma.—Dr. J. T. Ingram.

Elastoma Intrapapillare Perforans Verruciforme (Miescher).—Dr. S. T. Anning.

Lupus Erythematosus (Profundus).—Dr. J. T. Ingram.

?Poikiloderma in a Baby.—Dr. F. F. Hellier.

Poikiloderma and Pigmented Lichen Sclerosus (Lupus Erythematosus).—Dr. J. T. Ingram.

The following cases also were shown :

Candidiasis.—Dr. A. J. E. Barlow.

?Connective Tissue Naevus.—Dr. F. F. Hellier.

Kaposi's Sarcoma.—Dr. J. T. Ingram.

Steatocystoma Multiplex.—Dr. C. E. Stuart.

(1) Pressure Urticaria. (2) Red Urticaria, ?Mastocytosis. (3) Scleroderma.—Dr. F. F. Hellier.

Case for Diagnosis.—Dr. J. Savage.

Psoriasis.—Dr. J. T. Ingram.

Lichen planus with Scarring and Blistering.—Dr. F. F. Hellier.

Reticulum Cell Sarcoma.—Dr. J. T. Ingram.

Purpura and Parapsoriasis.—Dr. J. T. Ingram.

Polyarteritis Nodosa.—Dr. R. H. Seville and Dr. J. T. Ingram.

26 June 1958.

?Pityriasis Rubra Pilaris, ?Ichthyosiform Erythroderma. Hydrocephalus, ?Vitamin A Intoxication.—Dr. Brian Russell and Dr. F. Ray Bettley.

A boy aged 8.

History.—Skin abnormal since birth. For ten weeks, left tinnitus aurium and generalized headaches with unsteadiness of gait.

Examination.—Blowing systolic bruit over both temples. Papilloedema, slight ataxia, and punctuated speech. Tip of spleen palpable. Diffuse redness and scaling

of skin with sparseness of scalp hair and involvement of flexures. Slight dyskeratosis of palms.

Investigations.—C.S.F. normal. Air-encephalogram normal. Has had posterior fossa exploration and decompression.

Comment.—He has been treated as pityriasis rubra pilaris with vitamin A, 800,000 units a day, until the onset of the neurological symptoms. His skin was said to have " changed almost beyond recognition " on this treatment.

Discussion.

Dr. Bettley : When I first saw this boy I preferred the diagnosis of pityriasis rubra pilaris because there was marked follicular keratosis, especially in the trunk, and no accentuation of the eruption in the limb flexures. I advised treatment with vitamin A in large doses.

Dr. S. C. Gold : Dr. Larnder showed a patient here on 15 May, a woman with Darier's disease, who developed a similar picture to this. She had had large doses of vitamin A, at one time 8 million units a day. Since then she has been kept on lower doses and if she has more than 250,000 units a day she gets headaches and the vitamin A has to be stopped. The papilloedema has reverted.

Keratosis Follicularis Serpiginosa (Lutz).—Dr. D. S. Wilkinson.

A boy aged 10.

History.—About a year ago the child's mother noticed one or two pink papules on the side of his left cheek. These gradually spread, joining together to form rings and parts of rings. The rings extend outwards for a variable distance, the papules becoming tipped with tiny horny crusts which are easily picked off. The lesions then subside in these areas. Further lesions have appeared on the left cheek and more recently on the right cheek and on the right side of the back of the neck, just below the hair line. In the last two months one or two papules have appeared on the front of the left ear.

Examination.—He is a Mongol : he shows the typical appearance of this curious skin condition, with rings or parts of rings formed of a papular edge with a sharp inner and sloping outer border. Some of the papules are horny. Individual papules have the same features. The centres of the rings show the characteristic light, stippled atrophy. Some of the papules have the appearance of a deep pustule of yellowish colour. This is presumably due to the " elastoma " that later becomes extruded. The lesions are symptomless.

There has been no previous history of any skin trouble. Two other sibs are unaffected.

Biopsy (Dr. H. Haber).—" Elastoma intrapapillare verruciforme perforans." (This is the alternative name given to the condition by Miescher.)

Comment.—Several of these cases have now been seen and shown at various meetings in this country. The original case was described by Lutz in 1952 ; Miescher and Ruiter described others shortly afterwards.

All the cases have a very similar appearance, the sides of the nuchal area and sometimes the face and arms, being affected. The cause is quite obscure and the interest lies in the histology. It is curious that two of the dozen or so cases seen should have occurred in Mongols.

Discussion.

Dr. H. Haber : According to Miescher the lesion starts as an intrapapillary elastoma, which for some reason or other is expelled on to the surface by down-growing epidermis leading to perforation of the latter. There is, however, histological evidence that the pathogenesis might be of a different nature.

Hypercholesteraemic Xanthomatosis with Flexural Distribution.—Dr. Peter Smith (for Dr. Brian Russell).

A man aged 50. Compositor.

History.—Four months ago he began to develop slightly itchy yellowish papules. For several years he has had heartburn, nausea and sometimes vomiting following fatty food. He was jaundiced at birth. Operation for gastric ulcer two years ago. Phlebitis of leg followed operation for varicose veins.

Family history.—Nothing relevant.

Examination.—Yellowish-brown papules are seen mainly on the flanks, axillae groins and elbows. The buttocks and extensor aspects of the elbows and knees are normal. Arcus senilis. Liver edge palpable two finger's breadth below the costal margin.

Investigations.—Cholecystogram normal. Skin biopsy showed histology of xanthoma. W.R. and Kahn negative. W.B.C. 8200/cu. cm., normal differential. Appearance of serum clear. Blood cholesterol 445 mg./100 ml., blood phospholipids 665 mg. 100 ml. Thymol turbidity 3·6 units (normal 0·4). Serum alkaline phosphatase 6·0 units (normal 3–13). Van den Bergh 0·2 mg. bilirubin/100 ml. Serum proteins : albumin 3·3 g. 100 ml., globulin 3·2 g. 100 ml., α_1 0·3, α_2 0·7, β 1·2 γ 1·0. Radiographs : chest shows calcified tuberculous focus at left apex. Skull normal.

Comment.—The appearance and distribution of the papules suggested the diagnosis of normocholesteraemic xanthomatosis (xanthomata disseminata) and we were surprised to find raised blood cholesterol and phospholipid levels.

The following cases have been reported in *Proc. R. Soc. Med. :*

Polymyositis and Thyroiditis.—Dr. Denis Sharvill.

Scleroderma and Carcinoma.—Dr. Louis Forman and Mr. Hedley Atkins.

Besnier's Prurigo with Calcinosis.—Dr. Brian Russell.

The following cases also were shown:

Eruptive Papular Reticulogranuloma.—Dr. R. E. Church.

(1) Chronic Moniliasis of Mouth. (2) Pemphigus Vegetans. (3) ?Late Specific Eruption resembling Granuloma Annulare.—Dr. Louis Forman.

(1) Pityriasis Rubra Pilaris. (2) ?Lymphoedema. (3) Scaling of Palms and Soles (for Diagnosis). (4) ?Keratoacanthoma.—Dr. E. J. Moynahan.

Leukoderma Centrifugum Acquisitum (Sutton).—Dr. M. Garretts (for Dr. W. N. Goldsmith).

Sarcoidosis Resembling Necrobiosis Lipoidica.—Dr. Peter Smith for Dr. Brian Russell).

Cutaneous Leishmaniasis.—Dr. P. Montgomery (for Dr. E. J. Moynahan).

Necrobiosis Lipoidica Diabeticorum.—Dr. V. Wilson (for Dr. E. J. Moynahan).

Weber-Christian Disease in a Child of Four.—Dr. M. E. Eiloart (for Dr. G. B. Mitchell-Heggs).

NORTH OF ENGLAND DERMATOLOGICAL SOCIETY.

Liverpool, June 1958.

Urticaria Pigmentosa.—Dr. D. Black Macaulay.

A man aged 61.

Six years ago he developed pigmented spots on his body following exposure to tropical sunlight.

For about four years he has suffered from episodes of varying severity up to three times a week. In an attack he feels flushed and the upper half of his body becomes hot and red. There is palpitation and he feels weak and unsteady. This is succeeded by a feeling of coldness and clamminess and he becomes very pale and shocked in appearance.

The " histamine-shock " attacks are completely relieved by antihistamines and while taking antihistamines *regularly* he remains free from trouble.

On examination.—Pigmented spots on body which urticate after friction.

Investigations.—General examination—normal. B.P. 140 90. Skiagrams—Gastro-intestinal tract and skeleton normal. Noradrenaline output normal. No hydroxy-indole-acetic acid in urine. Bleeding time, prothrombin time and clotting time normal.

Histamine estimations (Professor Andrew Wilson).—Plasma before attack 4·2 mg., histamine per 100 ml. Plasma after attack 4·2 mgm. histamine per 100 ml. Whole blood before attack 14·5 mgm., histamine per 100 ml. Whole blood after attack 13·2 mgm., histamine per 100 ml.

These values are about 10 times normal.

Histology (Dr. J. M. Drennan).—No doubt this is an urticaria pigmentosa with " exhausted " mast cells. The main collections of cells mostly around the small blood vessels are completely devoid of the characteristic metachromatic material but from their general appearance I am sure that they are in fact mast cells. The large, rather irregular, slightly smudged nuclei with a wisp of ragged cytoplasm attached, separated by apparently empty spaces is quite the picture one sees in this phase. The isolated mast cells in the connective tissue stroma seldom lose all their metachromatic network and in these sections a number of them are recognizable. They are also more numerous here than in normal skin.

Comment.—This patient manifests histamine-shock attacks in association with urticaria pigmentosa (multiple mastocytomata). The history and findings suggest that in addition to multiple mastocytomata there is an endogenous histamine releaser present producing constant histamine discharge. This is still being investigated.

This appears to be the first case of its kind described in an adult human being. It is known to occur in animals and a case in an infant has recently been reported.

Pretibial Myxoedema.—Dr. Bamber.

This woman aged 49 was referred to hospital on account of poor circulation in her limbs, and possibly rosacea. She was then referred to the skin department where she was found to have a butterfly-shaped bright red flush over the middle of the face, slightly infiltrated to the touch. There was no thinning of the eyebrows, no obvious thinning of the hair, and the skin was not obviously dry. Below the knees both legs were swollen. Over the shins the skin was pale, slightly irregular with a somewhat gelatinous transparent look; the backs of the legs were acrocyanotic. The dorsa of the feet were puffy and distinctly doughy on palpation. On further questioning she

said that there had been some change in her voice and in the winter she felt the cold severely.

The blood cholesterol was 420 mgm.%.

Histology.—There is very marked myxomatous change in the deeper dermis with a relatively sharp line of demarcation between the relatively normal subepithelial region of the dermis and the underlying myxomatous tissue. Normal-looking sweat glands and bundles of smooth muscle are embedded in the myxomatous tissue.

The interesting feature is the appearance of well marked pretibial myxoedema in a woman who has no history of hyperthyroidism. On thyroid extract both the general condition and the legs are improving.

BOOK REVIEWS

Diagnosis and Treatment.*

Dr. Wiener has done a great service to all students of dermatology by translating this remarkable work by Professor H. W. Siemens, the German edition of which appeared in 1952, for this is essentially a commonsense book based upon many years of teaching experience. Concise opening chapters on the anatomy of the skin and on its histopathology are followed by a long and critical survey and assessment of the morphology of the primary and secondary lesions which compose eruptions. This survey is carefully illustrated by a veritable atlas of magnificent black and white photographs, many of which are close-up and reveal surprising detail. There follows a discussion of the importance of careful history taking and of appraisement of systemic and subjective symptoms which, together with the judicious use of auxiliary techniques, support objective findings in reaching a diagnosis.

There are several chapters on therapy in which the author places emphasis on topical applications and discusses the physical laws governing choice both of vehicles and of added active medicaments. Empiricism is the watchword and experience the guide in the management of this form of treatment and Professor Siemens gives a warning against the use of " recommended " or traditional remedies which are handed down through the literature of dermatology and which tend to be exhibited by the inexperienced under unfavourable conditions sometimes with distressing results. In this connection, the reviewer is interested to note more than one reference to the adverse effect of natural sunlight upon some cases of psoriasis.

A consideration of minor surgical and physical procedures and of systemic therapy of skin diseases closes a volume which for clarity of thought and expression has seldom been equalled and never surpassed. It should find a worthy place on the bookshelves of every specialist in dermatology. A. G. F.

Psychoanalysis in Eczema.†

It is well known that patients with so-called allergic disorders may have an underlying psychiatric disturbance and for them psychotherapy may be helpful to the point of cure. The raw material of psychosomatic research is case studies, and the more informative the personal histories and the less selected the cases, the more fruitful. Potentially therefore a book such as this could be of great value. A 32-year-old woman who had " eczema, involving trunk, limbs, and face, from which she had suffered almost continually from infancy ", in fact since the age of 3 months, and who later also developed asthma and hay fever, was treated by psychoanalysis and at the time of publication had reached 450 interviews, some of them under hypnosis. An edited version of 150 of these make up the book.

Dr. Abramson believes that the essential psychological pathogen in such cases is a " distorted relationship " with the mother, and he has therefore limited his selection

* *General Diagnosis and Therapy of Skin Diseases.* H. W. Siemens. Translated by Kurt Wiener (1958). Chicago : The University of Chicago Press. London : Cambridge University Press. Pp. 324. Figs. 375. Price 75*s.* net.

† *The Patient Speaks. Mother story verbatim in Psychoanalysis of Allergic Illness.* Harold A. Abramson, M.D. (1956). New York : Vantage Press. Pp. 239. $3.50.

to interviews which " deal specifically with ' the mother story ' ". This he calls " The Cronus complex, which portrays the engulfing parent who has never separated herself, in essence, from her growing child ". In his preface Professor M. Murray Peshkin accepts this thesis and suggests that the aim of psychotherapy in allergic disorders should be " parentectomy ".

The book is tedious and repetitive. What does it show? Dr. Abramson believes that tape recordings of interviews with patients make his material objective and scientific evidence. This cannot be accepted. By concentrating on the patient's relation with her mother his selection is admittedly biased and perforce subjective, and the reader is left with a one-sided picture. But not even a complete record of interviews would be objective evidence comparable with scientific data because in psychoanalytic studies of this kind a patient's utterances are determined by three extraneous forces : the type of psychotherapeutic interview ; the therapist's personality ; and his own theoretical preconceptions which determine his questions and interpretations and even have a direct influence on what the patient will think and say. Nowhere in this book is there any awareness of the extent to which these factors influence the evidence obtained. The fact that the patient improved is unfortunately not proof that it was due to successful " parentectomy " since most patients improve when allowed to talk freely and at length about themselves and receive such intense attention over years as psychoanalysis provides.

The search for specific conflicts to account for specific disorders which is tending to supplant the former search for specific personality types, which in turn derived from the age-old theory of humours and temperaments, is a short-cut method which errs by over-simplification certainly on the psychological side, and perhaps also on the dermatological. It makes the psychiatrist a psychic allergist searching for specific psychic allergens. The complex he ferrets out may give a truer picture of his personal foibles, theoretical tenets or loyalties to specific schools, than of what made his patient ill. Apart from your reviewer's allergic reaction to terms such as " parentectomy " it is a strain on one's common sense to assume with the author that an " engulfing mother " could produce eczema in a 3-months-old baby. It is no easy matter nowadays to be a psychiatrically blameless mother. One feels that if she had not been judged over-protective she would have been accused of having caused her child's eczema by lack of parental affection or rejection. An eczematous child is bound to have difficulties from unavoidable over-cosseting but then the mother of an eczematous child has her difficulties too. Who is to say which came first?

I. M.

Disseminated Lupus Erythematosus.*

Professor Duperrat has produced a comprehensive monograph on systemic lupus erythematosus. He draws particularly on his own clinical experience as well as that of his colleagues. The subject matter is presented in an orderly, concise fashion, making it a book with an appeal for general physicians. A short bibliography is included as well as a few black and white illustrations. S. C. G.

* *Le Lupus Érythémateux Disseminé.* B. Duperrat (1958). Paris : Editions Flammarion. Price 1500 francs.

CURRENT LITERATURE

CUTANEOUS HAEMOPOIESIS DURING INTRA-UTERINE LIFE. L. Popoff and N. Popoff (1958) *Ann. Derm. Syph. Paris*, **85**, 157.

A study based on 86 embryos which shows the presence of cutaneous haemopoiesis in uterine life. F. F. H.

ATTEMPTED CLASSIFICATION OF CONGENITAL KERATOSES. A. Touraine. (1958) *Ann. Derm. Syph. Paris*, **85**, 257.

This is a very difficult problem because of the mutiplicity of intermediate forms. Nevertheless, he suggests three main groups: (1) Pure keratoses. (2) Keratoses with dermal changes, e.g. hyperplasia of vessels giving rise to erythema. (3) Keratoses with evolving anomalies of the epidermis. Associated with epidermal keratoses there may be changes in the skin appendages. The list of subvarieties in the above groups is extremely comprehensive and useful for reference. F. F. H.

MELANODERMIA IN BRIGHT'S DISEASE. H. Thiers, Pierre P. Ravault, Daniel Colomb and Edouard Lejeune. (1958) *Ann. Derm. Syph. Paris*, **85**, 267.

The authors report two more cases of this uncommon phenomenon. It seems to occur in those who survive for a long time with a high blood urea. The mechanism of origin is uncertain, but may be due to the action of some of the retained substances, e.g. tyrosine etc. in the skin. F. F. H.

RESULTS OF LOCAL CORTISONE THERAPY IN SYPHILITIC INTERSTITIAL KERATITIS. A. N. Ashworth. (1958) *Brit. J. vener. Dis.* **34**, 83.

A review of the treatment of 50 cases of interstitial keratitis, treated with cortisone locally, revealed the following facts: (i) early freedom from symptoms, (ii) good expectation of a 6/6 visual acuity, (iii) no corneal scarring or so little that it does not interfere with visual acuity. The presence of corneal vascularization bears no relationship to the good prognosis, the incidence of relapses, or to the eventual outcome of the cases. W. G. A.

EARLY SYPHILIS. A CASE WITH SOME UNUSUAL FEATURES. Gerald Knight. (1958) *Brit. J. vener. Dis.*, **34**, 100.

The case of a shorthand-typist, aged 21 years, is described in which the primary lesion could not be discovered and, while the absence of a primary syphilitic sore is not exceptional, there were several points of interest in the case :— (i) A rather slow swing of the Wasserman reaction from negative to positive. (ii) The weak positive Wasserman in the presence of a florid secondary rash. (iii) The irritating nature of the rash. (iv) The confirmation of the clinical diagnosis by a Herxheimer reaction before the final blood serological report became available. W. G. A.

CARCINOMA OF THE OESOPHAGUS WITH KERATOSIS PALMARIS ET PLANTARIS (TYLOSIS). W. Howel-Evans, R. B. McConnell, C. A. Clarke and P. M. Sheppard. (1958) *Quart. J. Med.*, n.s., **27**, 413.

A detailed study of two Liverpool families with tylosis in which 18 members have developed carcinoma of the oesophagus. There is unequivocal evidence that the neoplasm was associated with tylosis in 17 of the patients and in only one has it been impossible to establish whether or not tylosis was present. No case of oesophageal carcinoma has occurred in members unaffected with tylosis.

The data show that about 70% of those with tylosis eventually succumb to carcinoma of the oesophagus.

As is usually the case tylosis in these families is inherited as an autosomal dominant. It is possible

that the two families are related. The most likely explanation of the association is that it is due to a mutation of the usual tylotic gene—but an environmental factor might be operating on the usual gene for tylosis.

No histological evidence of hyperkeratosis of the oesophagus was found in those cases so examined.

The authors have since investigated three other tylotic families and in none was carcinoma of the oesophagus discovered. The association has never been reported previously. There has been no previous convincing evidence that carcinoma of the oesophagus ever has any hereditary basis.

J. M. B.

BULLOUS ERUPTIONS OF THE SKIN. G. B. Dowling. (1958) *Practitioner*, **180**, 523.

Blisters can be caused by external agents, either by direct caustic action or allergic sensitivity. They are also seen as part of a drug reaction, e.g. phenolphthalein, sulphonamides and barbiturates. Bullae may also have an infective origin or be a manifestation of a congenital dystrophy. Other causes such as erythema multiforme, dermatitis herpetiformis and the pompholyx group of diseases are discussed, together with their treatment. R. J. C.

ROSACEA. R. M. B. MacKenna. (1958) *Practitioner*, **180**, 533.

A summary of recent theories of causation and the modern methods of treatment are discussed. R. J. C.

THE DIAGNOSIS AND TREATMENT OF TINEA PEDIS. G. A. Grant Peterkin. (1958) *Practitioner*, **180**, 543.

The various clinical types of tinea pedis are discussed, together with differential diagnoses from non-mycotic conditions. The recent treatment is outlined. R. J. C.

TUBERCULOSIS OF THE SKIN. B. Russell. (1958) *Practitioner*, **180**, 553.

An excellent résumé of the common tuberculous affections of the skin. These are discussed with the appropriate treatment and results. R. J. C.

ANTIBIOTICS IN DERMATOLOGY. G. B. Mitchell-Heggs. (1958) *Practitioner*, **180**, 564.

The systemic use of powerful wide spectrum antibiotics in minor skin infections is deprecated. Routine testing of organisms for antibiotic sensitivity should, when possible, be carried out before embarking on systemic therapy.

Penicillin, chloramphenicol and streptomycin applied to the skin may provoke epidermal sensitivity. Preferably neomycin, bacitracin and soframycin should be used when topical application is required.

Various dermatoses for which antibiotics are useful are mentioned and also the signs of antibiotic intolerance. R. J. C.

VITAMINS AND THE SKIN. R. L. Baer and S. J. Brodie. (1958) *Practitioner*, **180**, 573.

The clinical features of vitamin deficiencies are described. In other dermatological conditions vitamin therapy is often suggested. Vitamin A is used in pityriasis rubra pilaris, Darier's disease, ichthyosis, keratosis pilaris, lichen spinulosus, acne vulgaris and atopic dermatitis with obstruction of the sweat pores ; vitamin B complex is used in rosacea ; vitamin D is used in lupus vulgaris. Treatment with vitamins C, E, F and K is of doubtful use, except in frank vitamin deficiencies. The cutaneous side effects of vitamin therapy are described. R. J. C.

SOME CLINICAL ASPECTS OF RESEARCH ON SEBUM AND THE SEBACEOUS GLANDS. V. R. Wheatley. (1958) *Practitioner*, **180**, 580.

Both androgens and progesterone appear to stimulate sebaceous activity. Oestrogens have the converse effect. High atmospheric temperature also increases sebaceous gland function. The chemical nature of sebum is described, together with clinical states in which the composition is abnormal. R. J. C.